

Amendments to the Claims

Please amend the listing of claims as follows:

1. (Currently Amended) A rooftop air-conditioner (4) operating according to the cold vapor-compression principle using an internal coolant for a vehicle, in particular a bus, in which:

a sequence made up of a high-pressure side heat exchanging device (54) with an associated fan device ~~(16)~~, followed by an expansion device (52) and an evaporation device (36) ~~that are in contact on the inside with a~~ use the internal coolant[[,]];:

an internal channel arrangement ~~(12)~~, relative to the rooftop air-conditioner ~~(4)~~, to convey air to be conditioned, which exchanges heat with the evaporation device ~~(36)~~;

and a modular construction ~~(6)~~ of a high-pressure side heat exchanging device (54) with associated fan device (16) in its own housing ~~(6, 14)~~

are provided[[,]];:

characterized in that

connections (34) for ~~the~~ coupling of identical ~~said~~ high-pressure heat exchanging device (54) modules ~~(6a, 6b)~~ can be provided, prepared or designed[[,]]; and

~~that the modules (6 and 6a, 6b)~~ are designed for grid-like coupling ~~(7, 8; 34)~~ of modules of identical output and/or modules of stepped output.

2. (Currently Amended) A rooftop air-conditioner according to claim 1, characterized in that the coupling of the modules ~~(6 and 6a, 6b)~~ is done in the longitudinal direction of the vehicle.

3. (Currently Amended) A rooftop air-conditioner according to claim 1 ~~or~~ 2, characterized in that the high-pressure side heat exchanging device (54) to convey the internal coolant contains round tubes (20).
4. (Currently Amended) A rooftop air-conditioner according to claim 1 ~~or~~ 2, characterized in that the high-pressure side heat exchanging device (54) to convey the internal coolant contains flat tubes (21).
5. (Currently Amended) A rooftop air-conditioner according to ~~one of~~ claim[[s]] 1 through 4, characterized in that the housing (23) of the high-pressure side heat exchanging device (54) is dimensioned such that either round tubes (20) or flat tubes (21) can be installed to convey the internal coolant.
6. (Currently Amended) A rooftop air-conditioner according to ~~one of~~ claim[[s]] 1 through 5, ~~characterized in that it also contains,~~ provided with a heating device (40) to heat the air to be conditioned.
7. (Currently Amended) A rooftop air-conditioner according to claim 6 characterized in that the heating device has at least one heating heat exchanger (40) that is located inside the evaporation device (36) with its exterior fins being aligned with the airway of the air to be conditioned and alongside the external fins of at least one evaporating heat exchanger (36).
8. (Currently Amended) A rooftop air-conditioner according to ~~one of~~ claim[[s]] 1 through 7, characterized in that at least some, preferably all, modules (6a, 6b) in the grid are of the same longitudinal length.

9. (Currently Amended) A rooftop air-conditioner according to ~~one of~~ claim[[s]] 1 through 8, characterized in that the module (~~6 or 6a, 6b~~) also contains an evaporating device (~~36~~) and at least one section of an internal channel arrangement (~~12~~).

10. (Currently Amended) A rooftop air-conditioner according to ~~one of~~ claim[[s]] 1 through 8, characterized in that the internal channel arrangement (~~12~~) is provided separately from the module (~~6 or 6a, 6b~~) and is connected to it laterally.

11. (Currently Amended) A rooftop air-conditioner according to ~~one of~~ claim[[s]] 1 through 10, characterized in that the evaporating device (~~36~~) is arranged to the side of the internal channel arrangement (~~12~~).

12. (Currently Amended) A rooftop air-conditioner according to ~~one of~~ claim[[s]] 1 through 11, characterized in that the evaporating device (~~36~~) and/or the internal channel arrangement (~~12~~) is itself designed modularly (~~10; 14~~) with its own housing (~~24; 25~~).

13. (Currently Amended) A rooftop air-conditioner according to ~~one of~~ claim[[s]] 1 through 12, characterized in that [[it]] the air conditioner is subdivided in the transverse direction of the vehicle into sections ~~and or modules (6, 10, 14)~~ and that the relative angular position between adjacent pairs of sections, ~~modules or section and module~~ is adjustable (~~44; 46~~) in the transverse direction of the vehicle.

14. (Currently Amended) A rooftop air-conditioner according to claim 13, characterized in that at least one pair of sections, ~~modules or of section and module~~ is connected by means of a hinged ~~(44)~~ and/or soft bending ~~(46)~~ connection.

15 (Currently Amended) A rooftop air-conditioner according to claim ~~13 or~~ 14, characterized by a bridging device ~~(42)~~ slid in between the pairs of sections, ~~modules or between section and module~~.

16. (Currently Amended) A rooftop air-conditioner according to ~~one of~~ claims ~~1 through~~ 15, characterized in that different output levels of the module ~~(6, 14)~~ can be selected by using a different number of identical blower units ~~(38)~~ that can be installed in the evaporating device ~~(36)~~ and/or by a different number of identical fan units ~~(16)~~ that can be installed in the high-pressure side heat exchanging device ~~(54)~~.

17. (Currently Amended) A rooftop air-conditioner according to ~~one of~~ claims ~~1 through~~ 16, characterized in that the high-pressure side heat exchanging device ~~(54)~~, the evaporating device ~~(36)~~ and the at least one section of inner channel arrangement ~~(12)~~ each extends in the longitudinal direction of the vehicle ~~(and of the module 6, 10, 14)~~.

18. (Currently Amended) A rooftop air-conditioner according to ~~one of~~ claims ~~1 through~~ 17, characterized by a rooftop air-conditioner ~~(4)~~ construction in the transverse direction with a central arrangement of high-pressure side heat exchanging device ~~(54)~~, inner channel arrangements ~~(12)~~ on either side of [[it]] said high-pressure side heat exchanging device, followed by evaporating devices ~~(36)~~ on either side of that in turn said inner channel arrangements, said evaporating devices coupled to a respective expansion device ~~(52)~~.

19. (Currently Amended) A rooftop air-conditioner according to ~~one of claims 1 through~~ 18, characterized in that the inner channel arrangement ~~(12)~~ of the rooftop air-conditioner ~~(4)~~ has a space for installation ~~(in 24)~~ in which of a switching valve ~~(26)~~ is or can be installed to switch between conditioning the internal air in the vehicle, conditioning outside air fed to the vehicle, and/or a combination of the two.

20. (Currently Amended) A rooftop air-conditioner according to ~~one of claims 1 through~~ 19, characterized in that in at least one module ~~(6 or 6a, 6b)~~, the high-pressure side heat exchanging device ~~(54)~~ is supplemented with a compression device ~~(50)~~ in addition to a fan device ~~(16)~~.

21. (Currently Amended) A rooftop air-conditioner according to claim 20, characterized in that the supplemental compression device ~~(50)~~ in turn is designed modularly ~~(56)~~ with its own housing.

22. (Currently Amended) A rooftop air-conditioner according to ~~one of claims 1 through~~ 21, characterized in that in at least one module ~~(6 or 6a, 6b)~~, the high-pressure side heat exchanging device ~~(54)~~ is supplemented with a fuel cell device ~~(64)~~ in addition to a fan device ~~(16)~~.

23. (Currently Amended) A rooftop air-conditioner according to claim 22, characterized in that the supplemental fuel cell device ~~(64)~~ in turn is designed modularly ~~(68)~~ with its own housing ~~(66)~~.

24. (Currently Amended) A rooftop air-conditioner according to claim 22 ~~or~~ 23, characterized in that the fuel cell device (64) is provided with its own cooling device (70) inside the rooftop air-conditioner or its own cooling module.

25. (Currently Amended) A rooftop air-conditioner according to claim 23 ~~or~~ 24, characterized in that the internal coolant is also provided as the coolant for the fuel cell device (64).

26. (Currently Amended) A rooftop air-conditioner according to ~~one of~~ claims 22 through 25, characterized in that a tank (80) for the fuel of the fuel cell device (64) is incorporated into the rooftop air-conditioner (4).

27. (Currently Amended) A rooftop air-conditioner according to claim 26, characterized in that the tank (80) is ~~in turn~~ designed as a module (76) by itself.

28. (Currently Amended) A rooftop air-conditioner according to claims 23 ~~and~~ 26, characterized in that the tank (80) is incorporated into the module (68) of the fuel cell device (64).

29. (Currently Amended) A rooftop air-conditioner according to ~~one of~~ claims 1 through 28, ~~characterized in that the operating mode is designed to be~~ having a supercritical operating mode and that the high-pressure heat exchanging device (54) has a gas cooler for the internal coolant.